

IN THE CLAIMS:

1. (Original) An information recording/reproducing apparatus for recording or reproducing information data to or from a recording medium recorded with a synchronization signal and an address indicating a recording position which are preliminarily modulated, the information recording/reproducing apparatus comprising:
 - a reading unit for reading recorded information from the recording medium and obtaining a readout signal;
 - a timing pulse generator for generating a demodulated timing pulse in variable generation timing;
 - a demodulator for demodulating the synchronization signal and the address data representative of an address, from the readout signal according to the demodulated timing pulse;
 - an error corrector for carrying out an error correction process on the address data and obtaining corrected address data;
 - an address judging section for determining whether or not the corrected address data is a correct address; and
 - a synchronization controller for causing the timing pulse generator to execute a synchronization process for placing the generation timing in synchronism with the synchronization signal when the synchronization signal has a period equal to a predetermined period;whereby the synchronization controller, in the case the corrected address data is determined as a correct address, then puts the synchronization process into stand-by for execution until the corrected address data is determined as an incorrect address.
2. (Original) An information recording/reproducing apparatus according to claim 1, wherein the synchronization controller puts the synchronization process into stand-by for execution even during recording operation to the recording medium.

3. (Original) An information recording/reproducing apparatus according to claim 1, wherein the timing pulse generator comprises a counter for taking in a predetermined initial value in timing of the synchronization signal according to an executing command for the synchronization process supplied from the synchronization controller and making a counting from the initial value, and a part for generating a pulse signal when a count value of the counter agrees with a predetermined value and outputting it as the demodulated timing pulse.

4. (Original) An information recording/reproducing apparatus according to claim 1, wherein the address judging section determines the corrected address data as a correct address when the corrected address data increases or decreases consecutively by 1 at one time, and determines the corrected address data as an incorrect address when the address data is consecutively uncorrectable on error.

5. (Original) An information recording/reproducing apparatus for recording or reproducing information data to or from a recording medium recorded with a synchronization signal and an address indicating a recording position which are preliminarily modulated, the information recording/reproducing apparatus comprising:

a reading unit for reading recorded information from the recording medium and obtaining a readout signal;

a timing pulse generator for generating a demodulated timing pulse in variable generation timing;

a demodulator for demodulating the synchronization signal from the readout signal according to the demodulated timing pulse;

a synchronization controller for causing the timing pulse generator to execute a synchronization process for placing the generation timing in synchronism with the synchronization signal when the synchronization signal has a period equal to a predetermined period;

whereby the synchronization controller puts the synchronization process into stand-by for execution during recording operation to record the information data to the recording medium.

6. (Original) An information recording/reproducing apparatus according to claim 5, wherein the timing pulse generator comprises a counter for taking in a predetermined initial value in timing of the synchronization signal according to an executing command for the synchronization process and making a counting from the initial value, and a part for generating a pulse signal when a count value of the counter agrees with a predetermined value and outputting it as the demodulated timing pulse.

7. (Original) An information reproducing apparatus for reproducing information data from a recording medium recorded with a synchronization signal and an address indicating a recording position which are preliminarily modulated, the information reproducing apparatus comprising:

a reading unit for reading recorded information from the recording medium and obtaining a readout signal;

a timing pulse generator for generating a demodulated timing pulse in variable generation timing;

a demodulator for demodulating the synchronization signal and the address from the readout signal according to the demodulated timing pulse;

an error corrector for carrying out an error correction process on the address data and obtaining corrected address data;

an address judging section for determining whether or not the corrected address data is a correct address; and

a synchronization controller for causing the timing pulse generator to execute a synchronization process for placing the generation timing in synchronism with the synchronization signal when the synchronization signal has a period equal to a predetermined period;

whereby the synchronization controller, in the case the corrected address data is determined as a correct address, then puts the synchronization process into stand-by for execution until the corrected address data is determined as an incorrect address.

8. (Original) An information reproducing method for reproducing, from a recording medium recorded with a synchronization signal and an address indicating a recording position which are preliminarily modulated, the synchronization signal and address from the recording medium when recording or reproducing information data to or from the recording medium, the information reproducing method comprising:

a reading step for reading recorded information from the recording medium and obtaining a readout signal;

a timing pulse generating step for generating a demodulated timing pulse in variable generation timing;

a demodulating step for demodulating the synchronization signal and the address data representative of the address, from the readout signal according to the demodulated timing pulse;

an error correcting step for carrying out an error correction process on the address data and obtaining corrected address data;

an address determining step for determining whether or not the corrected address data is a correct address; and a synchronization control step for executing a synchronization process for placing the generation timing in synchronism with the synchronization signal when the synchronization signal has a period equal to a predetermined period;

whereby the synchronization control step, in the case the corrected address data is determined as a correct address, then puts the synchronization process into stand-by for execution until the corrected address data is determined as an incorrect address.

9. (Original) An information reproducing method according to claim 8, wherein the synchronization control step puts the synchronization process into stand-by for execution even during recording operation to the recording medium.

10. (Original) An information reproducing apparatus according to claim 8, wherein the timing pulse generating step comprises a counting step for taking in a predetermined initial value in timing of the synchronization signal according to an executing command for the synchronization process and making a counting from the initial value, and a step for generating a

pulse signal when a count value of the counter agrees with a predetermined value and outputting it as the demodulated timing pulse.

11. (Original) An information reproducing method according to claim 8, wherein the address determining step determines the corrected address data as a correct address when the corrected address data increases or decreases consecutively by 1 at one time, and determines the corrected address data as an incorrect address when the address data is consecutively uncorrectable for error.

12. (Original) An information reproducing method for reproducing, from a recording medium recorded with a synchronization signal and an address indicating a recording position which are preliminarily modulated, the synchronization signal and address from the recording medium when recording or reproducing information data, the information reproducing method comprising:

- a reading step for reading recorded information from the recording medium and obtaining a readout signal;

- a timing pulse generating step for generating a demodulated timing pulse in variable generation timing;

- a demodulating step for demodulating the synchronization signal from the readout signal according to the demodulated timing pulse;

- a synchronization control step for causing to execute a synchronization process for placing the generation timing in synchronism with the synchronization signal when the synchronization signal has a period equal to a predetermined period;

- whereby the synchronization control step puts the synchronization process in stand-by for execution during the recording operation to record the information data to the recording medium.

13. (Original) An information reproducing method to claim 12, wherein the timing pulse generating step comprises a count step for taking in a predetermined initial value in timing of the synchronization signal according to an executing command for the synchronization process and making a counting from the initial value, and a step for generating a pulse signal when a count

value of the counter agrees with a predetermined value and outputting it as the demodulated timing pulse.

Please add new claims 14 and 15 as follows:

14. (New) An information recording/reproducing apparatus according to claim 3, wherein the synchronization controller puts the synchronization process into stand-by for execution even during recording operation to the recording medium.
15. (New) An information reproducing method according to claim 10, wherein the synchronization control step puts the synchronization process into stand-by for execution even during recording operation to the recording medium.